

Research Techniques in Education Practice Test 7

60 original multiple-choice questions for teacher test preparation (FPSC / FGEI / PPSC style). Choose one answer for each question. The full answer key is on the last page — worked explanations for every question are free on the test page at QuaidianPoint.com.

Name: _____ Class: _____ Score: _____ / 60

Meaning, Purpose and Types of Research

Q1. A researcher who changes the method halfway through a study because an early result is disappointing has broken which principle?

- (A) The need for a very large sample in every study
- (B) The requirement to follow a planned, systematic method
- (C) The need for a control group in every kind of study
- (D) The need to publish results as quickly as possible

Q2. Educational research differs from routine school administration mainly because research:

- (A) Uses school funds for its work
- (B) Writes longer reports than administrators do
- (C) Follows the headteacher's orders in every step
- (D) Systematically investigates a question to produce dependable knowledge

Q3. Basic research is mainly concerned with which of the following?

- (A) Building theory and adding to fundamental knowledge without an immediate practical use
- (B) Fixing a timetable clash in one particular school
- (C) Testing a new textbook in a single classroom this term
- (D) Preparing an annual report for a district office

Q4. A researcher studies low homework completion in her own school and trials a new reminder system to raise it. This is an example of which type of research?

- (A) Historical research
- (B) Basic research
- (C) Applied research
- (D) Philosophical research

Q5. Action research is distinguished from other types mainly because it is carried out by whom?

- (A) Practitioners studying and improving their own practice
- (B) Historians studying documents from the past
- (C) Statisticians analysing national census data
- (D) Publishers reviewing manuscripts for a journal

Q6. Which characteristic is most essential for a study to be called scientific research?

- (A) It uses impressive charts and long quotations
- (B) It confirms whatever the researcher already believed
- (C) It is completed in the shortest possible time
- (D) It is systematic, objective and open to checking by others

Q7. How does research differ from casual inquiry about a classroom problem?

- (A) Research relies only on memory and guesswork
- (B) Research follows a systematic method and gathers evidence before concluding
- (C) Research avoids defining the problem clearly
- (D) Research never reports its method or findings

Q8. A head teacher wants to decide whether group work or lecture work raises science scores. What is the most research-based way to decide?

- (A) Choose the method the senior teachers prefer
- (B) Choose the method used in the neighbouring school
- (C) Compare the two methods with planned evidence from comparable classes
- (D) Choose the method that needs the least preparation

Q9. Pure research is also known by which other name?

- (A) Action research
- (B) Survey research
- (C) Case study research
- (D) Fundamental research

Q10. Which statement best describes the scope of action research?

- (A) It is local, practical and aimed at immediate improvement in a specific setting
- (B) It aims to create a universal law of learning for all countries
- (C) It studies only events that happened more than fifty years ago
- (D) It avoids any action or change in the classroom

Research Process, Problem, Variables and Hypotheses

Q11. What is usually the first step in the research process?

- (A) Writing the final report
- (B) Analysing the collected data
- (C) Identifying and defining the research problem
- (D) Selecting a statistical test

Q12. A research problem stated so broadly that it covers a whole education system is most likely to:

- (A) Be answered by a single questionnaire
- (B) Become unmanageable within the available time and resources
- (C) Need no review of earlier literature
- (D) Produce identical results in every school

Q13. A teacher notices that students who revise in short daily sessions score better than those who cram before exams. This observation is best seen as what?

- (A) A final conclusion of a study
- (B) A statistical formula
- (C) A sampling frame
- (D) A source of a research problem from classroom experience

Q14. In a study of the effect of type of feedback on pupils' writing scores, type of feedback is which variable?

- (A) The independent variable, because it is the factor varied
- (B) The dependent variable, because it is measured at the end
- (C) The intervening variable, because it comes between cause and effect
- (D) The constant, because it never changes

Q15. In a reading study, the amount of daily reading practice given to pupils is which variable?

- (A) The dependent variable, because it is measured at the end
- (B) The independent variable, because it is the factor varied
- (C) The control variable, because it is held constant
- (D) The extraneous variable

Q16. A study finds that motivation seems to link a new teaching method to higher achievement, but motivation itself is not directly manipulated. Motivation here is best called which variable?

- (A) The independent variable
- (B) The dependent variable
- (C) An intervening variable
- (D) A sampling variable

Q17. A researcher keeps class size, textbook and test time the same for both groups in an experiment. These factors are being treated as what?

- (A) Control variables held constant to avoid confusion
- (B) Dependent variables measured for change
- (C) Hypotheses to be proved
- (D) Research tools for data collection

Q18. A hypothesis differs from a theory mainly in that a hypothesis is:

- (A) A proven law that needs no further testing
- (B) A summary of the final results of a study
- (C) A list of references for the study
- (D) A single testable prediction, while a theory is a broader explanation already supported by evidence

Q19. The statement "There is no significant difference in scores between the two teaching methods" is an example of which hypothesis?

- (A) A directional hypothesis
- (B) A working hypothesis for a pilot study only
- (C) A null hypothesis
- (D) A historical hypothesis

Q20. The claim that group discussion improves scores more than lecturing, stated before the study, is an example of a:

- (A) Null hypothesis
- (B) Directional hypothesis
- (C) Non-directional hypothesis
- (D) Research objective

Research Tools: Questionnaire, Interview and Observation

Q21. A questionnaire is most useful when a researcher needs to collect what?

- (A) Written responses from a large number of people in a short time
- (B) Blood samples for a medical test
- (C) Historical documents from an archive
- (D) Secret observations without asking anyone

Q22. A questionnaire item that asks "Do you agree that homework is useful and fairly marked?" is weak mainly because it is which of the following?

- (A) An open-ended item
- (B) A rating-scale item
- (C) A double-barrelled item asking two things at once
- (D) A factual item about age

Q23. Which type of questionnaire item gives respondents freedom to answer in their own words?

- (A) A closed item with fixed choices
- (B) A checklist item
- (C) A ranking item
- (D) An open-ended item

Q24. In a structured interview, the interviewer mainly does which of the following?

- (A) Lets the conversation drift to any topic the respondent prefers
- (B) Asks the same set of questions in the same order to every respondent
- (C) Avoids asking any prepared questions
- (D) Records only the answers that support the hypothesis

Q25. An unstructured interview is most suitable when the researcher wants to achieve what?

- (A) Identical numerical scores for every respondent
- (B) A quick yes-or-no answer from hundreds of people
- (C) A standardised test score
- (D) Rich, in-depth understanding of a person's experiences and views

Q26. A major strength of the interview as a research tool, compared with a postal questionnaire, is that it allows the researcher to do what?

- (A) Clarify questions and probe answers on the spot
- (B) Avoid all contact with respondents
- (C) Collect data with no training at all
- (D) Guarantee that respondents will answer honestly

Q27. In non-participant observation, the observer mainly does which of the following?

- (A) Joins the group as a full member and teaches the class
- (B) Changes the behaviour being studied on purpose
- (C) Watches and records behaviour without taking part in it
- (D) Interviews every person after the lesson ends

Q28. A researcher uses a checklist to record how often a teacher asks open questions during a lesson. This is an example of which observation approach?

- (A) Unstructured observation with no focus
- (B) Structured observation using a planned recording scheme
- (C) Participant observation as a student
- (D) Historical observation of old records

Q29. Which of the following is a common limitation of observation as a research tool?

- (A) The presence of an observer can change the behaviour being observed
- (B) Observation always produces numerical test scores
- (C) Observation cannot record any classroom behaviour
- (D) Observation requires no planning or recording at all

Q30. A researcher wants detailed views from a small number of head teachers about a new curriculum, including follow-up on surprising answers. The most suitable single tool is which of the following?

- (A) A closed questionnaire sent to thousands of parents
- (B) A standardised achievement test
- (C) A rating scale completed by students
- (D) A semi-structured interview

Research Tools: Tests and Rating Scales, Data Types and Literature Review

Q31. An achievement test in mathematics is designed mainly to measure what?

- (A) A student's future potential in an unrelated field
- (B) A student's personality traits
- (C) What a student has already learned in a subject
- (D) A teacher's years of service

Q32. A Likert scale item that asks respondents to choose from Strongly Agree to Strongly Disagree is best described as which kind of tool?

- (A) A rating scale measuring the strength of an attitude or opinion
- (B) An achievement test of factual knowledge
- (C) An observation checklist for behaviour counts
- (D) A sampling frame for selecting schools

Q33. A teacher rates each student's class participation as Excellent, Good, Fair or Poor. This judgement is recorded with which tool?

- (A) A questionnaire
- (B) A rating scale
- (C) An interview schedule
- (D) A census form

Q34. A test that is used to predict how well a student may perform in a future course is best called which type of test?

- (A) An achievement test
- (B) A diagnostic test of current weakness only
- (C) A classroom quiz on last week's lesson
- (D) An aptitude test

Q35. Interview transcripts, field notes and open-ended written comments are examples of which type of data?

- (A) Qualitative data expressed in words and meanings
- (B) Secondary numerical data
- (C) Quantitative data expressed in counts and scores
- (D) Census data from a whole country

Q36. Test scores, attendance counts and percentages of passes are examples of which type of data?

- (A) Qualitative data
- (B) Historical data
- (C) Quantitative data expressed in numbers
- (D) Confidential data that cannot be analysed

Q37. Which method estimates reliability by giving the same test twice to the same group?

- (A) Test-retest method
- (B) Split-half method
- (C) Expert judgement of content
- (D) Item difficulty analysis

Q38. A researcher analyses last year's board examination results published by the education department. These results are best called which type of data?

- (A) Primary data
- (B) Interview data
- (C) Observation data
- (D) Secondary data already collected by someone else

Q39. A main purpose of reviewing the literature before a study is to do what?

- (A) Copy long passages into the thesis
- (B) Identify what is already known and where a gap remains
- (C) Avoid reading any previous research
- (D) Replace the need for collecting new data

Q40. The complete list of all members of the population from which a sample is drawn is called the:

- (A) Sample actually studied
- (B) Population itself
- (C) Sampling frame
- (D) Quota for the study

Research Designs

Q41. In an experiment, the main purpose of a control group is to:

- (A) Receive extra teaching beyond the normal programme
- (B) Be studied in a different school from the experimental group
- (C) Answer questionnaires but take no tests
- (D) Provide a baseline against which the experimental group's results are compared

Q42. A study compares two existing classes, one taught with a new method and one with the usual method, but students were not randomly assigned. This design is best called which of the following?

- (A) A quasi-experimental design
- (B) A historical design
- (C) A case study design
- (D) A correlational design

Q43. A researcher surveys 500 teachers about their use of digital tools and reports the percentages. This design is best called which of the following?

- (A) An experimental design
- (B) A survey design describing present conditions in a population
- (C) A historical design
- (D) An ex post facto design

Q44. A survey of 500 teachers across a province, describing their views on a new curriculum, is best called which design?

- (A) An experimental design
- (B) A historical study
- (C) A survey design
- (D) A case study design

Q45. In ex post facto research, the researcher mainly does which of the following?

- (A) Manipulates a variable before measuring the outcome
- (B) Assigns students randomly to treatments
- (C) Studies a cause after the fact by comparing groups that already differ
- (D) Reconstructs events from the distant past only

Q46. A study finds that as study hours increase, test scores also tend to increase, without claiming that study hours cause the rise. This is an example of which design?

- (A) An experimental design
- (B) A correlational design examining the relationship between two variables
- (C) A historical design
- (D) A case study design

Q47. Historical research is most valuable when a researcher wants to understand:

- (A) Scores on next year's examination
- (B) Opinions held by present-day pupils
- (C) Effects of a new method tested in a laboratory
- (D) How present educational practices developed from past events and decisions

Q48. Which design is strongest for showing a cause-and-effect relationship between a teaching method and achievement?

- (A) A case study of one student
- (B) A survey of opinions
- (C) A true experimental design with random assignment and control
- (D) A historical review of old reports

Q49. A researcher studies the relationship between school library use and reading interest, but does not change either variable. The main limitation is that the study cannot do what?

- (A) Describe the two variables
- (B) Prove that library use causes reading interest
- (C) Collect data from students
- (D) Report a correlation value

Q50. Which design is most suitable for answering the question "What proportion of secondary teachers in a district use formative assessment regularly?"

- (A) An experimental design
- (B) A historical design
- (C) A case study of one teacher
- (D) A survey design

Sampling, Statistics, Action Research, Ethics and Report Writing

Q51. The sampling frame in a study is best defined as:

- (A) The complete list of population members from which the sample is actually drawn
- (B) The small group finally studied
- (C) The group receiving the experimental treatment
- (D) The list of references at the end of a report

Q52. In stratified random sampling, the researcher first does which of the following?

- (A) Selects only the easiest schools to reach
- (B) Picks every tenth name from a list
- (C) Divides the population into homogeneous groups and then samples randomly within each
- (D) Asks participants to recruit their friends

Q53. A researcher lists all schools in a district, picks every fifth school, and surveys all teachers in those schools. This combines which sampling methods?

- (A) Purposive and quota sampling
- (B) Systematic sampling of schools with cluster sampling of teachers
- (C) Snowball and convenience sampling
- (D) Stratified and simple random sampling only

Q54. A researcher studying street children in a city asks each child interviewed to suggest another child who could take part. This is an example of which sampling method?

- (A) Simple random sampling
- (B) Stratified sampling
- (C) Cluster sampling
- (D) Snowball sampling

Q55. The mean, median and mode are all measures of which of the following?

- (A) Central tendency, showing a typical value in a set of scores
- (B) Correlation between two variables
- (C) Differences between experimental groups
- (D) Sampling error in a survey

Q56. The standard deviation is most useful for showing what about a set of scores?

- (A) The most frequent score only
- (B) The middle score only
- (C) How spread out or dispersed the scores are around the mean
- (D) Whether two variables are related

Q57. A researcher uses a t-test to compare the mean scores of two groups and a chi-square test to compare frequencies in categories. Both tests belong to which branch of statistics?

- (A) Descriptive statistics only
- (B) Inferential statistics, used to draw conclusions about a population
- (C) Historical statistics
- (D) Qualitative coding

Q58. In the action research cycle, after reflecting on the results of an action, the practitioner most sensibly does what next?

- (A) Stops the inquiry permanently
- (B) Hides the results from colleagues
- (C) Deletes the original problem statement
- (D) Plans a revised action and begins a new cycle of improvement

Q59. A researcher explains a study to parents, obtains their permission, and promises that children's names will not appear in any report. These steps mainly uphold which ethical principles?

- (A) Informed consent and confidentiality
- (B) Random sampling and control
- (C) Correlation and validity
- (D) Quota sampling and stratification

Q60. In a thesis, the chapter that reviews earlier studies and shows the gap for the present study usually comes in which position?

- (A) After the data analysis chapter
- (B) Before the research design and methodology chapter
- (C) After the appendices
- (D) As the final chapter after conclusions

Answer Key

Q1: B	Q11: C	Q21: A	Q31: C	Q41: D	Q51: A
Q2: D	Q12: B	Q22: C	Q32: A	Q42: A	Q52: C
Q3: A	Q13: D	Q23: D	Q33: B	Q43: B	Q53: B
Q4: C	Q14: A	Q24: B	Q34: D	Q44: C	Q54: D
Q5: A	Q15: B	Q25: D	Q35: A	Q45: C	Q55: A
Q6: D	Q16: C	Q26: A	Q36: C	Q46: B	Q56: C
Q7: B	Q17: A	Q27: C	Q37: A	Q47: D	Q57: B
Q8: C	Q18: D	Q28: B	Q38: D	Q48: C	Q58: D
Q9: D	Q19: C	Q29: A	Q39: B	Q49: B	Q59: A
Q10: A	Q20: B	Q30: D	Q40: C	Q50: D	Q60: B

Worked explanations for all 60 questions:

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